

# INTERNATIONAL SEARCH REPORT

Inter I Application No  
PCT/IB2004/051419

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H03K17/14 H03K17/687

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H03K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 952 869 A (FATTORI ET AL) 14 September 1999 (1999-09-14) column 2, line 52 - column 3, line 27; figure 3	1,2,8-10
X	US 5 422 588 A (WYNNE ET AL) 6 June 1995 (1995-06-06) column 3, line 36 - column 4, line 10; figures 3A,3B	1,2,8,10
X	US 3 657 575 A (KENJI TANIGUCHI ET AL) 18 April 1972 (1972-04-18) column 2, line 57 - column 4, line 65; figures 4,5	1,8,10
A	US 5 801 572 A (NAKAMURA ET AL) 1 September 1998 (1998-09-01) figures 1,7,10	1,10
-/--		



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*G\* document member of the same patent family

Date of the actual completion of the international search

3 May 2005

Date of mailing of the international search report

11/05/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Santos, P

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/051419

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 543 632 A (ASHLEY ET AL) 6 August 1996 (1996-08-06) the whole document	5, 13

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/051419

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5952869	A	14-09-1999	DE	19527486 A1	30-01-1997
US 5422588	A	06-06-1995	NONE		
US 3657575	A	18-04-1972	DE NL	2111979 A1 7103303 A	21-10-1971 15-09-1971
US 5801572	A	01-09-1998	JP JP	2790071 B2 8236755 A	27-08-1998 13-09-1996
US 5543632	A	06-08-1996	JP JP	2572510 B2 6097795 A	16-01-1997 08-04-1994